LEGEND:

--- Not Cost Effective

--- Cost Effective

TABLE 1

IADLEI			
NON-INTERSTATE			
THREE	E SEA	L COAT TREATMENTS	
		Estimated Design Life of	
		HBP Surfacing	
		(Est. Cost = \$200,000)	
	20		
3R t =	1	\$180,100	
ce Life of 3 (Est. Cost @ \$16,000)	2	\$176,700	
ife t. C 16,0	2 3	\$173,200	
Est Est	4	\$169,800	
7ice 13 (8)	5	\$166,400	
ery erla erla & 3	6	\$163,000	
d S Ove	7	\$159,500	
de t. C),0(8	\$156,100	
Extended Service Life of 3R Struct. Overlay (Est. Cost = \$150,000 & 3 @ \$16,000)	9	\$152,700	
Ex. Str	10	\$149,300	

TABLE 3

PM MICRO SURFACING			
		Estimated Design Life of	
		3R Struct. Mill & Overlay	
		(Est. Cost = \$167,600)	
		20	
J(1	\$213,300	
fe (18 0)	2 3	\$203,300	
Eij 56,	3	\$193,500	
ice Irfa 56	4	\$184,000	
Su Su = \$	5	\$174,600	
Se Se St	6	\$165,500	
ted Vije	7	\$156,600	
ma M I st.	8	\$147,900	
Estimated Service Life of PM Micro Surfacing (Est. Cost = \$56,000)	9	\$139,300	
五	10	\$131,000	

TABLE 2

INTERSTATE			
THREE	THREE SEAL COAT TREATMENTS		
		Estimated Design Life of	
		HBP Resurfacing	
		(Est. Cost = \$330,000)	
		20	
Cost	1	\$366,400	
) S S	2	\$358,900	
e Life of (Est. Cost \$21,000)	3	\$351,400	
ice g (1) (2)	4	\$343,800	
xtended Servic P Resurfacing 3330,000 & 3 @	5	\$336,300	
& Eac	6	\$328,800	
led sur	7	\$321,300	
end Re	8	\$313,700	
Extended Service Life of BP Resurfacing (Est. Co: \$330,000 & 3 @ \$21,000	9	\$306,200	
E HH H = {	10	\$298,700	

TABLE 4

PM THIN LIFT OVERLAY		
		Estimated Design Life of
		3R Structural Overlay
		(Est. Cost = \$150,000)
		20
Estimated Service Life of PM Thin Lift Overlay (Est. Cost = \$60,000)	1	\$200,800
fe c [ay 0)	2	\$191,800
erl 60,	3	\$183,100
	4	\$174,500
ift = \$	5	\$166,200
ted Se hin L Cost	6	\$158,000
ted Co	7	\$150,000
ma I T St.	8	\$142,200
Stin PV (E)	9	\$134,600
丑	10	\$127,100

LEGEND:

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TABLE 5

MINOR CPR		
		Estimated Design Life of
		Major CPR
		(Est. Cost = \$200,000)
		15
a ~ 6	1	\$204,900
Service for CPR \$20,000)	2	\$190,100
er r C 320	3	\$175,600
d S ino = \$	4	\$161,300
mated of Min Cost =	5	\$147,400
	6	\$133,600
Estimated Service Life of Minor CPR Est. Cost = \$20,000	7	\$120,200
	8	\$106,900

TABLE 6

MINOR CPR (TWICE)			
		Estimated Design Life	
		of Major CPR	
		(Est. Cost = \$200,000)	
		15	
e r r 0)	1	\$166,600	
vice ino ,00	2	\$152,100	
er Mi	3	\$137,900	
ted Service First Minor CPR st = \$20,000)	4	\$124,000	
mate of Fi CI Cost	5	\$110,300	
im; of C	6	\$96,900	
Estimated Service Life of First Minor CPR (Est. Cost = \$20,000	7	\$83,700	
I (E	8	\$70,700	

LEGENI	D:
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	Cost Effective

TABLE 7

MINOR CPR (GRINDING)		
		Estimated Design Life of
		Major CPR
		(Est. Cost = \$200,000)
		15
ife 0)	1	\$224,900
n L ,00,	2 3	\$210,100
gig ing 540		\$195,600
Deg ind = \$	4	\$181,300
St. 3	5 6	\$167,400
of C	6	\$153,600
stimated Design Life of Grinding (Est. Cost = \$40,000)	7	\$140,200
Es (E	8	\$126,900

TABLE 9

HBP RESURFACING			
		Estimated Design Life of	
		PCC Reconstruction	
		(Est. Cost = \$1,300,000)	
		30	
Jt	1	\$1,566,600	
fe (2 3 4 5 6	\$1,505,200	
Li ing),0(3	\$1,445,600	
ice fac 330	4	\$1,387,800	
urj urj	5	\$1,331,700	
Estimated Service Life of HBP Resurfacing (Est. Cost = \$330,000)	6	\$1,277,200	
ted PJ Co	7	\$1,224,400	
tima HB Est.	8	\$1,173,000	
stin]	9	\$1,123,100	
E	10	\$1,074,600	

TABLE 8

MAJOR CPR			
		Estimated Design Life of	
		PCC Reconstruction	
		(Est. Cost = \$1,300,000)	
		30	
Jt	1	\$1,436,600	
rvice Life C CPR \$200,000)	2 3	\$1,375,200	
L: 1	3	\$1,315,600	
vice CPR \$200	4 5 6	\$1,257,800	
. C ≤	5	\$1,201,700	
ited Ser Major (Cost =	6	\$1,147,200	
ted Ma Co	7	\$1,094,400	
stima] Est.	8	\$1,043,000	
Estimated Service Life of Major CPR (Est. Cost = \$200,000)	9	\$993,100	
田	10	\$944,600	

TABLE 10

CPR & HBP RESURFACING		
		Estimated Design Life of
		PCC Reconstruction
		(Est. Cost = \$1,300,000)
		30
e ost 00)	1	\$1,088,100
7ic (),0	2	\$1,030,100
Servi (Est. \$330,	3	\$973,700
S to S 2	4	\$919,100
ate PF	5	\$866,000
imat of CF 3,300	6	\$814,400
Estinife of \$\\$73,3	7	\$764,300
L iii = \$	8	\$715,700

Note: Tables 8, 9, and 10 for Major CPR, HBP Resurfacing, and Major CPR & HBP Resurfacing are provided for comparative purposes only. These strategies are not considered to be preventive maintenance strategies.

Example of Life Cycle Cost for Non-Interstate Three Seal Coat Treatments:

Life Cycle Cost Formula (Present Worth)

= 3R Structural Overlay Cost + [1st Seal Coat Cost * ((1 + Discount Rate)^ - Yr Seal Coat Performed] + [2nd Seal Coat Cost * ((1 + Discount Rate)^ - Yr Seal Coat Performed)] + [3rd Seal Coat Cost * ((1 + Discount Rate)^ - Yr Seal Coat Performed)] - [3R Structural Overlay Cost * (Estimated Service Life/Estimated Design Life) * ((1 + Discount Rate)^ -Estimated Design Life)]

Life Cycle Cost Formula (Present Worth)

= \$150,000 + [\$16,000 * ((1 + .04)^ -²] + [\$16,000 * ((1 + .04)^ -¹0)] + [\$16,000 * ((1 + .04)^ -¹8)] - [\$150,000 *
$$(n/20)$$
 * $((1 + .04)^ -²0)$]

3R STRUCTURAL OVERLAY			
3R Structural Overlay			
Cost	\$150,000		
Estimated Design Life	20		
Discount Rate	4%		
Life Cycle Cost	\$150,000		

FIRST SEAL COAT

1 st Seal Coat Cost Yr Seal Coat	\$16,000
Performed	2
Estimated Design Life	2
Discount Rate	4%
	. 70
Life Cycle Cost	\$164,793

THIRD SEAL COAT	
3 rd Seal Coat Cost	\$16,000
Yr Seal Coat	
Performed	18
Estimated Design Life	2
Discount Rate	4%
Life Cycle Cost	\$183,500

SECOND SEAL COAT

2 nd Seal Coat Cost Yr Seal Coat	\$16,000
Performed	10
Estimated Design Life	2
Discount Rate	4%
Life Cycle Cost	\$175,602